WHAT IS CLAIMED IS:

1. An optical lens obtained by a process which comprises the steps of:

mixing together an optically clear dead polymer, a reactive plasticizer in an amount to render the composition semi-solid and malleable, and, optionally, an initiator to form a semi-solid polymerizable composition, wherein the semi-solid polymerizable composition remains optically clear and exhibits low shrinkage upon polymerization;

shaping the semi-solid composition into a desired geometry; and

exposing the semi-solid composition to a source of polymerizing energy;

to give the resultant optically clear lens comprising a crosslinked polymer network of reactive plasticizer within an entangled dead polymer.

2. An optical lens according to claim 1 wherein the dead polymer and the reactive plasticizer exhibit compatibility at temperatures not higher than 100°C.

3. An optical lens formed from a semi-solid polymerizable composition that comprises a mixture of i) a dead polymer derived from monomers that cannot be polymerized in less than 10 minutes in a mold under UV exposure, ii) a reactive plasticizer in an amount to render the composition semi-solid and malleable, the reactive plasticizer having a refractive index that closely matches the refractive index of the dead polymer and being capable of forming a crosslinked network when polymerized, and iii) optionally, an initiator, the dead polymer and reactive plasticizer exhibiting compatibility at temperatures not higher than 100°C; and wherein the polymerizable composition is capable of polymerizing in less than 10 minutes in a mold under UV exposure, and wherein when polymerized the polymerizable composition exhibits an optical clarity of at least 85% at 2 mm thickness, a refractive index of at least 1.5, a glass transition temperature of at least 80°C, a modulus of elasticity greater than 10^9 dynes/cm^2, a Shore D hardness greater than 80, and an Abbe number greater than 25.

4. An optical lens according to claim 3 which comprises a semi-interpenetrating crosslinked polymer network of reactive plasticizer within an entangled dead polymer.

5. An optical lens according to claim 3 wherein the polymer network of reactive plasticizer is further crosslinked to the dead polymer.

6. An optical lens according to claim 3 which comprises interpenetrating reactive plasticizer polymeric chains within an entangled dead polymer.

7. An optical lens according to claim 3 which is impact-resistant.

8. An optical lens according to claim 3 which exhibits high fidelity replication.

9. An optical lens according to claim 3 which exhibits dimensional stability.

10. An optical lens according to claim 3 wherein the dead polymer is selected from the group consisting of polystyrenes, polysulfones, polyacrylates, poly(meth)acrylates, polycarbonates, polyolefins, polyurethanes, copolymers and block copolymers.

11. An optical lens according to claim 3 which is an ophthalmic lens.

12. An optical lens according to claim 3 which is a contact lens.

13. An optical lens according to claim 3 wherein the reactive plasticizer comprises reactive functional groups selected from the group consisting of acrylate, methacrylate, acrylic anhydride, acrylamide, vinyl, vinyl ether, vinyl ester, vinyl halide, vinyl silane, vinyl siloxane, (meth)acrylated silicones, vinyl heterocycles, diene, allyl, epoxies (with hardeners) and urethanes.

14. An optical lens formed from a semi-solid polymerizable composition comprising an optically clear dead polymer, a reactive plasticizer in an amount to render the composition semi-solid and malleable, and, optionally, an initiator, wherein the semi-solid polymerizable composition remains optically clear and exhibits low shrinkage upon polymerization.

15. An optical lens according to claim 14 which is an ophthalmic lens.

16. An optical lens according to claim 14 which is a contact lens.

17. An optical lens according to claim 14 wherein the dead polymer and the reactive plasticizer exhibit compatibility at temperatures not higher than 100°C.

18. A shaped article formed from a semi-solid polymerizable composition comprising a dead polymer, a reactive plasticizer in an amount to render the composition semi-solid and malleable, and an initiator, the dead polymer and reactive plasticizer exhibiting compatibility at temperatures not higher than 100°C, and wherein the semi-solid polymerizable composition exhibits low shrinkage upon polymerization.

19. A shaped article according to claim 18 which is an optical data storage disk.

20. A shaped article according to claim 18 which is an optically transparent sheet suitable for use as a window or glazing material.